AMENDMENTS TO THE CLAIMS

Please amend claims as follows:

1. (Previously Presented) An electric power system comprising:
a weather data input means for inputting weather data, temperature, atmospheric pressure and weather, at predetermined time intervals, in the district of an operating transmission line;
a digital processing unit;
a memory means for storing said transmission line data that shows relations between a corona discharge start voltage and weather conditions at each transmission line, and processed data by said digital processing unit;

and a power system analysis means, wherein said digital processing unit calculates the corona discharge start voltage at said transmission line by the data on weather forecasts and said transmission line data, if the calculated corona discharge start voltage is lower than a normal transmission voltage of the line, a countermeasure transmission voltage that is recorded in said memory means in advance is selected to set a transmission voltage of the transmission line or stop transmitting electric power on the transmission line, and if the calculated corona discharge start voltage is above the normal transmission voltage of the line, the normal transmission voltage is selected as the set transmission voltage of the transmission line, and wherein said power system analysis means analyzes loads of apparatuses of the power system.

2-11. (canceled)

12. (Previously Presented) The electric power system as claimed in claim 1, wherein the calculation of the corona discharge start voltage by said digital processing unit is executed as follows:

(1) the transmission line is an object for which a corona discharge is to be suppressed,

(2) said digital processing unit reads data to determine whether past data should be used or not, and if the past data should be used, the past data recorded in said memory means is used for the corona discharge start voltage, and

(3) if the past data cannot be used, the corona discharge start voltage at the transmission line is calculated by substituting the weather forecast data and the transmission data in an equation.

13. (Currently Amended) ~~The~~ An electric power system comprising:

a corona discharge detection means for detecting the occurrence of corona discharge at a transmission line;

a digital processing unit wherein said digital processing unit converts information detected by the corona discharge detect means into information which is needed by a superior power system analysis means;

~~a memory means for storing transmission line data and processed data by said digital processing unit;~~

~~a power system analysis means;~~

~~a weather detecting means;~~ and

a transmitter wherein said transmitter transmits said converted information to the superior power system analysis means,

wherein said digital processing unit stops a corona discharge in a short time by lowering a transmission voltage of a transmission line that generates the corona discharge, or stops transmitting electric power in the transmission line when said corona discharge detection means detects a corona discharge, and

wherein said power system analysis means adjusts loads of apparatuses in the electric power system.

14. (Previously Presented) The electric power system as claimed in claim 13,

wherein said digital processing unit stores weather conditions in said memory means before and after occurrence of a corona discharge, and changes the transmission voltage to a previous one, when weather conditions are assumed not to generate a corona discharge.

15. (Previously Presented) The electric power system as claimed in claim 13, wherein said corona discharge detection means is an ultraviolet light detecting device.

16. (Previously Presented) The electric power system as claimed in claim 13, wherein said corona discharge detection means is an ultraviolet light detecting device that detects ultraviolet light of a wavelength 100 nm to 320 nm.

17. (Previously Presented) The electric power system as claimed in claim 13, wherein said digital processing unit restores the previous transmission voltage on a predetermined time after lowering the transmission voltages.

18. (Currently Amended) A method for operating electric power system suppressing corona discharge from viewpoint of environment, the method ~~An electric power system operating method~~ comprising:

inputting weather data, temperature, atmospheric pressure and weather at predetermined time intervals in the district of an operating transmission line;

calculating a corona discharge start voltage at a transmission line by the data on weather forecasts and the transmission line data,

if the calculated corona discharge start voltage is the same or lower than a normal transmission voltage of the line, a countermeasure transmission voltage that is recorded in the memory means in advance is selected to set a transmission voltage of the transmission line, and

if the calculated corona discharge start voltage is above the normal transmission voltage of the line, the normal transmission voltage is selected as the set transmission voltage of the transmission line, and

~~and deciding a set transmission voltage of the transmission line by a digital processing unit;~~

storing transmission line data and processed data in memory means by a digital processing unit; and

analyzing loads of apparatuses of the power system by a power system analysis means.

19. (Currently Amended) The electric power system operating method as claimed in claim 18, wherein the calculating the corona discharge start voltage includes:

(1) judging whether or not the transmission line is an object for which a corona discharge is to be suppressed,

(2) deciding whether past data should be used or not, and if the past data should be used, the past data recorded in said memory means is used for the corona discharge start voltage, and

(3) calculating the corona discharge start voltage at the transmission line by substituting weather forecast data and the transmission data in an equation, if the past data cannot be used.

20. (Previously Presented) An electric power system operating method comprising:

detecting a corona discharge on a transmission line;

stopping the corona discharge in a short time by lowering a transmission voltage of a transmission line that generates the corona discharge, or stopping transmitting electric power in the transmission line;

adjusting loads of apparatuses in the electric power system; and

operating the apparatuses under an adjusted condition for supplying electric power.

21. (Previously Presented) The electric power system operating method as claimed in claim 20, further comprising:

storing weather conditions in a memory means before and after occurrence of a corona discharge; and

changing the transmission voltage to a previous one, when weather conditions are assumed not to generate a corona discharge.